#### (12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

## (19) World Intellectual Property Organization

International Bureau



# (111) (11) (111) (111) (111) (111) (111) (111) (111) (111) (111) (111) (1

(43) International Publication Date 23 June 2005 (23.06.2005)

**PCT** 

# (10) International Publication Number WO 2005/057676 A1

(51) International Patent Classification<sup>7</sup>: 51/40

H01L 51/20,

(21) International Application Number:

PCT/IT2003/000813

(22) International Filing Date:

12 December 2003 (12.12.2003)

(25) Filing Language:

Italian

(26) Publication Language:

English

- (71) Applicant (for all designated States except US): CON-SIGLIO NAZIONALE DELLE RICERCHE [IT/IT]; Piazzale Aldo Moro, 7, I-00185 Roma (IT).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): COCCHI, Massimo [IT/IT]; c/o Consiglio Nazionale delle Ricerche, Instituto per la Sintesi Organica e Fotoreattivitá, Via P. Gobetti, 101, I-40129 Bologna (IT). DI MARCO, Piergiulio [IT/IT]; c/o Consiglio Nazionale delle Ricerche, Instituto per la Sintesi Organica e Fotoreattivitá, Via P. Gobetti, 101, I-40129 Bologna (IT). FATTORI, Valeria [IT/IT]; c/o Consiglio Nazionale delle Ricerche, Instituto per la Sintesi Organica e Fotoreattivitá, Via P. Gobetti, 101, I-40129 Bologna (IT). GIRO, Gabriele [IT/IT]; c/o Consiglio Nazionale delle Ricerche, Instituto per la Sintesi Organica e Fotoreattivitá, Via P. Gobetti, 101, I-40129 Bologna (IT).

VIRGILI, Dalia [IT/IT]; c/o Consiglio Nazionale delle Ricerche, Instituto per la Sintesi Organica e Fotoreattivitá, Via P. Gobetti, 101, I-40129 Bologna (IT). GARULLI, Aberto [IT/IT]; c/o Consiglio Nazionale delle Ricerche, Instituto per la Sintesi Organica e Fotoreattivitá, Via P. Gobetti, 101, I-40129 Bologna (IT).

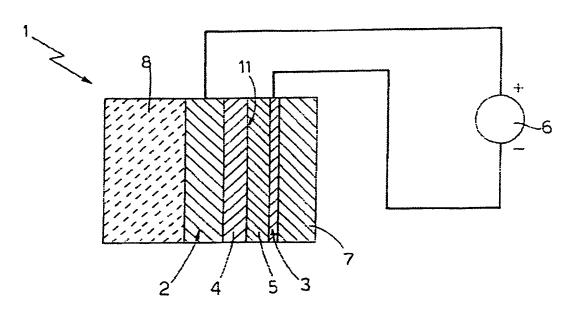
- (74) Agents: JORIO, Paolo et al.; c/o Studio Torta S.r.l., Via Viotti, 9, I-10121 Torino (IT).
- (81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (regional): ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

#### Published:

with international search report

[Continued on next page]

(54) Title: METHOD FOR REDUCING THE SURFACE ROUGHNESS OF A THIN LAYER OF CONDUCTIVE OXIDES



(57) Abstract: A method for reducing the surface roughness of thin layers of conductive oxides for thin-layer opto-electronic devices envisages polishing with a finishing cloth and an abrasive compound, which has a basic pH and contains silica particles.

#### 

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

## CORRECTED VERSION

## (19) World Intellectual Property Organization

International Bureau



## 

(43) International Publication Date 23 June 2005 (23.06.2005)

**PCT** 

### (10) International Publication Number WO 2005/057676 A1

(51) International Patent Classification7: 51/40

H01L 51/20,

(21) International Application Number:

PCT/IT2003/000813

(22) International Filing Date:

12 December 2003 (12.12.2003)

(25) Filing Language:

Italian

(26) Publication Language:

**English** 

- (71) Applicant (for all designated States except US): CON-SIGLIO NAZIONALE DELLE RICERCHE [IT/IT]; Piazzale Aldo Moro, 7, I-00185 Roma (IT).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): COCCHI, Massimo [IT/IT]; c/o Consiglio Nazionale delle Ricerche, Istituto per la Sintesi Organica e Fotoreattivitá, Via P. Gobetti, 101, I-40129 Bologna (IT). DI MARCO, Piergiulio [IT/IT]; c/o Consiglio Nazionale delle Ricerche, Istituto per la Sintesi Organica e Fotoreattivitá, Via P. Gobetti, 101, I-40129 Bologna (IT). FATTORI, Valeria [IT/IT]; c/o Consiglio Nazionale delle Ricerche, Istituto per la Sintesi Organica e Fotoreattivitá, Via P. Gobetti, 101, I-40129 Bologna (IT). GIRO, Gabriele [IT/IT]; c/o Consiglio Nazionale delle Ricerche, Istituto per la Sintesi Organica e Fotoreattivitá, Via P. Gobetti, 101, I-40129 Bologna (IT).

VIRGILI, Dalia [IT/IT]; c/o Consiglio Nazionale delle Ricerche, Istituto per la Sintesi Organica e Fotoreattivitá, Via P. Gobetti, 101, I-40129 Bologna (IT). GARULLI, Alberto [IT/IT]; c/o Consiglio Nazionale delle Ricerche, Istituto per la Sintesi Organica e Fotoreattivitá, Via P. Gobetti, 101, I-40129 Bologna (IT).

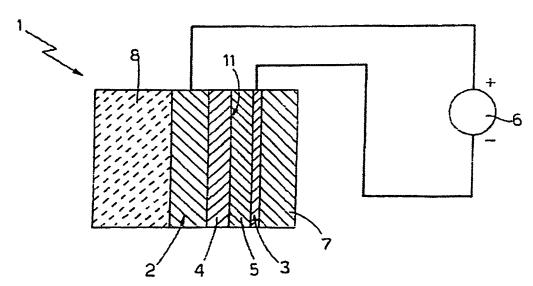
- (74) Agents: JORIO, Paolo et al.; c/o Studio Torta S.r.l., Via Viotti, 9, I-10121 Torino (IT).
- (81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (regional): ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

#### Published:

with international search report

[Continued on next page]

(54) Title: METHOD FOR REDUCING THE SURFACE ROUGHNESS OF A THIN LAYER OF CONDUCTIVE OXIDES



(57) Abstract: A method for reducing the surface roughness of thin layers of conductive oxides for thin-layer opto-electronic devices envisages polishing with a finishing cloth and an abrasive compound, which has a basic pH and contains silica particles.







(48) Date of publication of this corrected version:

29 September 2005

(15) Information about Correction: see PCT Gazette No. 39/2005 of 29 September 2005, Section II For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.